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In responding to questionnaires, 14 southern states provided information about their school programs to determine the desirability of establishing an accelerated vocational-technical school program. Some of the findings were: (1) The principle goal is training and retraining individuals in skills salable on the employment market, (2) The curriculums depend largely upon the demands of the locality for trained workers, (3) The trend seems to be toward establishing vocational-technical schools which will serve a particular area of the state, (4) All of the states reported some form of vocational-technical program being conducted, and many reported plans for expansion and improvement in the immediate future, (5) While every state offered vocational education as part of its public school curriculum, only two used high schools exclusively, (6) Five states operated a system of junior colleges, eight operated area vocational-technical schools, and three used all three educational systems, and (7) Operational expenditures ranged from $300,000 per year in Alabama to $13 million per year in Florida. Both a general summary of programs of all the states studied and state-by-state summaries are presented. (MM)

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RESEARCH DEPARTMENT

# ARKANSAS LEGISLATIVE COUNCIL

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## VOCATIONAL AND TECHNICAL SCHOOL PROGRAMS

## OF SELECTED STATES

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Research Report No. 124

August, 1964

Room 315, State Capitol Building

Little Rock, Arkansas

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August 4, 1964

TO: COMMITTEE ON EDUCATION

Representative L. H. Autry, Chairman
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Proposal No. 22, by Representative McCastlain of Monroe, provides for "a study of the programs of other states, and especially of the southern states, for the establishment and operation of vocational-technical schools. Such study shall be for the purpose of determining the desirability and feasibility of the State of Arkansas establishing an accelerated vocational-technical school program."

This report contains information about the vocational-technical school programs of selected states, and is limited largely to a discussion of such programs in the southern area. The first portion of the report summarizes the various programs in the states studied. Thereafter appears a state-by-state summary of the vocational-technical school programs of the states included in the study.

Research Department
Arkansas Legislative Council

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This is a factual report prepared by the Research Department of the Arkansas Legislative Council and does not reflect findings or conclusions of the Legislative Council or of the Committee on Education.

# VOCATIONAL AND TECHNICAL SCHOOL PROGRAMS OF SELECTED STATES

## SUMMARY

Vocational-technical education has as its principle goal the training and retraining of individuals in skills salable on the employment market. In a broad sense, vocational-technical education is the teaching of skills for use in industry by technical workers who do not intend to go on to full college programs. More specifically, the programs of vocational-technical education are designed to give relatively concentrated training in either agriculture, business, health services, industrial-technical skills, or home economics. The curricula depends largely upon the demands of the locality for trained workers, and the types of students usually served include the following:

(a) Recent high school graduates not desiring a full college program
(b) Mature youths who have dropped out of high school or college
(c) Unemployed adults who desire retraining
(d) Employed workers desiring improvement
(e) Students presently in high school who wish to supplement their basic education with vocational training.

Since the training needs of these persons are many and varied, not all students may find training in the same vocational-technical schools -- even in those states conducting extensive programs.

The trend in the states studied for this report seems to be toward the establishment of vocational-technical schools which will serve a particular area of the State. These so called "area" vocational-technical schools are for the most part intended to provide training for out-of-high-school students, including employed workers. Qualified applicants to such schools may learn a trade in one, two or three year courses with emphasis being on placing the student in gainful employment as quickly as possible.

The greatest emphasis in most vocational-technical school programs is being placed on training skilled craftsmen and technicians. There is no attempt made to train engineers, this being left to the colleges and universities where full four and six year courses are available. An engineer devotes most of his time, energy and effort to dealing with ideas and concepts - theory. A craftsman, on the other hand, devotes his time and effort to the manipulative areas and his course of study is considerably shorter than that required for the engineer. A technician is about half-way between the craftsman and the engineer. He possesses sufficient knowledge, understanding, and abilities in the area of theory to enable him to communicate effectively with the engineer, and sufficient ability in the manipulative area to take the ideas and concepts of the engineer and apply them in a laboratory or industrial setting. The training period required for technicians is usually less than that required for engineers, but more than is required for craftsmen.

An attempt has been made in this study to determine the extent of development and operation of vocational-technical programs in the various southern states. In order to view the dimensions of the programs being presently conducted as well as the plans for the near future, a questionnaire was circulated among certain states for their comment. The information thus obtained was classified in the following manner with respect to each state:

1. Extent of Program
2. Costs of Program
3. Enrollment Data
4. Training Programs Offered

The following paragraphs present a digest of the information submitted in respect to these four categories, and each state will be discussed separately later.

Extent of Program. The fourteen states replying - Alabama, Florida, Georgia, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina,

Tennessee, Texas, Virginia and West Virginia - all reported some form of vocational-technical program being conducted at the present time, and many reported considerable plans for expansion and improvement in the immediate future. Each of the states reporting operates one or more of the following types of vocational-technical programs:

1. High School vocational education
2. Junior College vocational-technical education
3. Area vocational-technical schools financed partly by local funds and partly by state and federal funds
4. State owned and operated vocational-technical schools for which all expenses are borne by the state with the possible assistance of the federal government on some programs.

While every state replying offered some vocational education as a part of their public school curricula, only two, Florida and West Virginia, seem to use this program exclusively. At the present time four counties operate vocational-technical centers in West Virginia which serve two or more high schools each. Florida offers quite extensive programs of vocational-technical education as a part of its public school system. Actually Florida has a rather unique operation in that the program is within the public school system and supported jointly by local, state, and federal funds, yet classes may be attended in one of three facilities - high schools, junior colleges, and vocational-technical institutes.

Alabama, Maryland, North Carolina and Texas operate a system of junior colleges to supplement their other vocational-technical programs. Mississippi is the only state contacted which uses this type program exclusively. Mississippi has a system of 17 junior colleges receiving funds from the state and federal governments for their operation. Through this system of junior colleges Mississippi offers much the same type vocational-technical education as other states offer in their vocational-technical institutes and centers.

Alabama, Kentucky, Louisiana and North Carolina have state owned and operated schools for which the state provides all or almost all finances. Louisiana operates all vocational-technical schools in this manner, while the other three states do so only in conjunction with some other type of operation.

Alabama, Georgia, Kansas, Kentucky, Missouri, North Carolina, Tennessee, and Virginia operate local or "area" vocational-technical schools. Georgia, Kansas, Missouri, Tennessee, and Virginia operate this kind of school only. It should be emphasized, however, that all states offer some high school vocational education such as agriculture or home economics.

In the typical "area" school program the locality shares a good portion of the expense of operation, and, in some cases, is responsible for providing the building and/or the land. In addition to the expense, the locality shares heavily in the administration and operation of the schools, and often has complete charge of administration. While this type operation seems to be obtaining more popularity among the states generally, Kentucky, who has operated area schools since 1939, is trending away from this in favor of operation by the State Board of Education.

At least three of the states studied (Alabama, Florida and North Carolina) utilize all three methods of vocational-technical education, i.e., high school junior college and vocational-technical centers.

Costs of Programs. Operational expenditures for vocational-technical education range from approximately $300,000 per year in Alabama to over $13 million per year in Florida. Those states offering this information report the following annual operational expenditures:*

| | |
|---|---|
| Alabama | $ 300,000 to $500,000 |
| Florida | $ 13,000,000 |
| Georgia | $ 400,000 |
| Kansas | $ 700,000 |
| Kentucky | $ 6,500,000 |
| Louisiana | $ 4,600,000 |

| | | |
|---|---|---|
| Maryland | $ | 3,000,000 |
| Mississippi | $ | 750,000 |
| Missouri | $ | 1,000,000 |
| North Carolina | $ | 6,000,000 |
| Tennessee | $ | 750,000 |
| Texas | | Not available |
| Virginia | $ | 7,000,000 |
| West Virginia | $ | 2,000,000 |

* approximations and based on different years.

These funds are generally derived in one of two ways. Either the state assumes full responsibility for the operation of the vocational education system. or the locality shares the expense with the state. Also, certain federal funds are available for use in vocational education and many states have begun to use these moneys to supplement the program.

Some schools charge a tuition of $10 to $15 per month while others charge only for consumable supplies used by the students. This does not include housing or food which is available at some schools for additional cost.

Enrollment Data. Most vocational-technical schools have programs designed for the high school, post high school and employed student. There is, however, generally a required entrance examination with minimum entrance requirements to be met. In many cases each student is given a personal interview with a counselor in order to accurately place the student in an area of study suited to his personality. Vocational guidance has become an important part of the vocational-technical school program.

Enrollment in each school depends upon many variables such as area served, size and facilities of the school, courses offered, whether year round or not, etc. The trend is upward, however, and almost every school studied has shown a marked increase in attendance in recent years. Such increases are expected to continue on the whole, although certain areas may show a decline due to local industry and population fluctuations.

Training Programs Offered. Vocational-technical education training programs

range from the very basic agriculture and home economics courses offered in high schools to the complex technical courses preparing technicians for work in electronics and related fields. Emphasis is placed on preparing students to fulfill employment needs in the locality or state where educated. In many cases local industry helps select, or at least has great influence on the selection of, courses to be offered by the vocational-technical schools. Many schools offer "on-job training" programs for the students to give trainees better job judgment by providing actual experience. This, of course, depends upon the industry available nearby.

Another important program found in many states is the "Adult Education" program geared to assist industry in up-grading employees. The courses offered in this program are designed around the needs of local industry and most of the classes are held in the evening in order to enable workers to attend.

VOCATIONAL AND TECHNICAL SCHOOL PROGRAMS OF SELECTED STATES

STATE - BY - STATE DATA

ALABAMA

Extent of Program. Alabama is presently operating ten State vocational-technical schools; seven of which are well established and three of which are in their early stages of operation. The first school was established in 1925, the next four schools were authorized in 1947 and the others have been authorized from time to time by the Legislature. The 1963 Legislature authorized and provided for the building of 15 additional vocational-technical schools and 14 junior colleges. Alabama has three vocational-technical schools operated by local boards of education, and in addition, carries on a program of vocational instruction as a part of the regular high school curricula.

Costs of Program. The Legislature appropriated $675,000 each for the building and equipping of the four vocational-technical schools in 1947 and two others were recently authorized for which $1,000,000 were appropriated for building and equipment. For the seven larger schools an annual appropriation of around $300,000 each is made to operate the schools. The state does not participate in either building or equipment costs of the three vocational-technical schools operated by local boards of education, but does pay the salary of teachers. The state also reimburses the local boards of education for salaries paid to some 60 day trade teachers in regular high schools. No separate appropriation is made for this particular program. It comes from the funds allocated to the State Department of Education for Vocational Education.

Enrollment Data. The size of the school enrollment in the state vocational-technical schools ranges from 250 to 500 per school and each student is required to pay $10 per month tuition.

Training Programs Offered. Section 1 of Acts of 1947, p. 515 reads in part: "The State Board of Education shall establish and maintain regional trade schools for the purpose of training young men and women in useful occupations in the arts and sciences. The State Board of Education shall have authority to purchase or lease buildings, land, equipment, machinery, and supplies necessary for the teaching of trade courses."

## FLORIDA

Extent of Program. Florida has an extensive program of vocational-technical education operated as a part of the public school system and supported jointly by local, state and federal funds. Florida does not presently have vocational-technical schools supported and operated separate and apart from the public schools by either the state or the various communities. Currently, however, a state-wide study is being conducted to determine the feasibility and location of such schools.

The educational system in Florida, within which the vocational-technical program is currently housed, is structured on the basis of 67 county educational systems, each having a county Superintendent of Public Instruction. The vocational-technical education program in each of the 67 counties has been developed independently of the other counties and reflects various influences and initiative on the part of the locality. The independent development is noted even in size and scope in that some counties have established sizable vocational-technical programs while others have limited offerings.

Vocational programs may be housed in any of a number of different school plants. Some classes are held in regular high schools known as "comprehensive high schools" while other classes are conducted in junior colleges. Still other classes are conducted in vocational schools and vocational-technical institutes. All programs, no matter where classes are conducted, are a part of the public

school system. The location of classes seems to be varied and depends on employment need, facilities and funds available.

Costs of Program. Financial support for the various programs during fiscal 1963 amounted to approximately $13 million from all sources. Ninety percent of the money came from state and local sources and the remainder was federal money authorized by federal vocational education acts. The state provided about $9 million, the federal government about $1.3 million, and the localities provided $2.8 million in vocational-technical education funds.

Enrollment Data. Total enrollment in vocational education in 1963 went over the 200,000 mark. This includes students in both preparatory and extension classes. Enrollment in federally-supported programs reached 152,000 while enrollment in state-and locally-supported programs topped the 54,000 figure.

Training Programs Offered. The vocational education services include agriculture, business, distributive and cooperative education, homemaking, industrial and technical education and practical nursing. There are 1160 separate programs from which to choose and the students are grouped as "in-school" or all-day students, or "out-of-school" and adult students.

## GEORGIA

Extent of Program. Georgia is in the process of completing a statewide system of 28 Area Vocational-Technical Schools serving 20 areas of the state. When completed, these schools, with the two state-owned schools already established, will represent an investment of more than $25 million dollars in vocational education.

Costs of Program. Experience thus far indicates the maintenance and operation of a physical plant involving eight or more training areas will be at least $15,000 annually, excluding salaries and consumable supplies. Half the

cost of constructing and equipping these area schools, ranging from $250,000 to $6,000,000 each, is borne by the Georgia State Board for Vocational Education and the other half is paid by the area. The local area provides the land for the construction of the school and pays for repairs, maintenance, heat, light, insurance, janitor, and other services and supplies as may be needed to maintain the program, including tool and machinery maintenance. The State furnishes funds for the employment of administrative and teaching personnel and establishes salary schedules therefor. Each school is operated by a local or "area" board of education (in most cases the local board where the school is located serves in this capacity).

Enrollment Data. The students attending these area schools as well as those attending the two statewide schools, are charged no tuition and are admitted on the basis of aptitude, interest and achievement. Upon being admitted, enrollees may commute or may be housed in dormitories provided on many of the campuses. The only costs to the students are for boarding and for consumable supplies.

An enrollment of from 15,000 to 20,000 is expected when all schools are in operation, with enrollments for each school running from 260 to well over 2,000.

Training Programs Offered. Students will have available courses of study preparing them for skilled trades, health occupations, office occupations, and technical occupations. While not all of the courses are offered in every location, each school provides a minimum of eight courses which range in length from six months to two years. The schools operate 12 months out of the year, and, where effective, at night as well as day.

## KANSAS

Extent of Program. At present, Kansas has only one school which is State supported that could be classified as an area vocational-technical school. This school is operated by the State Board for Vocational Education in cooperation

with the Board of Regents and is at Kansas State College of Pittsburg. The program is post high school but less than college grade and is reimbursed with vocational education funds.

The 1963 session of the Kansas Legislature passed legislation which provides for the establishment of a statewide system of area vocational-technical schools and the State Board for Vocational Education has approved six locations for area schools. Most of these six schools are planned to begin training by September 1964 in existing or rented facilities.

Costs of Program. The 1964 session of the Legislature appropriated $700,000 to begin implementing this program. These funds will be distributed, along with federal funds, to assist the local districts in financing the schools. New buildings are being planned for most of the centers, ranging in cost from $400,000 to $1,000,000. Plans call for these schools to be operating in permanent facilities by September 1965.

Enrollment Data. Enrollment is expected from those students unable or not wishing to attend college, yet who need training in some field of endeavor which will equip them to accept employment opportunities as they arise. The programs will also be geared to the use of adults in need of and desiring vocational training.

Training Programs Offered. Courses will be offered for jobs in industrial occupations, agriculture and agricultural-related occupations, home and community service occupations, and business occupations. Course offerings are based on the need for such trained workers. While not all courses offered will be available at every school each school will provide a minimum of five curriculams, ranging in length from six months to two years. Area schools will provide training in three or more of the major areas of industrial, agricultural, business, and home and community service occupations.

KENTUCKY

Extent of Program. Kentucky has 13 area vocational-technical schools of which three are operated by local boards of education, and ten are operated by the State Board of Education. The trend in Kentucky is for all area Vocational schools to be operated by the State Board of Education. Extension centers are being developed in conjunction with the original thirteen schools. These centers are being established primarily to serve the students in the junior and senior classes of a number of high schools within commuting distance of the center. It is expected that the day-school preparatory program in the extension centers will consist almost entirely of high school students. Training for adults will be provided after regular school hours and during the evening in these centers. A committee of vocational educators and others have developed a plan for locating extension centers and criteria have been developed for selecting the locations.

When the area vocational program is fully implemented in Kentucky it is expected that vocational education in trades and industry will be available within commuting distance of most of the high schools in the state. The area vocational school system in Kentucky began in 1939 with the establishment of two vocational schools. In 1959 an agreement known as the State Plan for Vocational Education in Kentucky between the U. S. Office of Education and the Kentucky State Board of Education was adopted and approved. The State Plan covers, in broad outline, the program of vocational education projected by Kentucky. It will be further implemented by State Board policies and regulations. Local boards of education are expected, also, to use this plan as a guide in building their programs of vocational agriculture, home economics, distributive and trade and industrial education.

Costs of Program. The program of vocational education in Kentucky is

financed through local, state, and federal funds. All vocational units are allotted to the district sending pupils to the area vocational school. This district contracts with the area vocational school for all pupils under 21 years of age from its schools. The contract rate will depend largely on the funds received from the state. Each classroom unit in vocational education carries with it an allotment of funds for each teacher as follows:

| | |
|---|---|
| Teachers' salaries | $4,000 to $4,600 |
| Operation costs | $ 900 |
| Capital outlay | $ 600 |

The cost of instruction for students under 21 years of age is financed through the foundation* program. These students pay only a fee of $3 per month for instructional supplies. The cost of instruction for students 21 years of age and over is financed through state and federal funds for vocational education and from fees charged each student. At the present time the fee for those 21 years of age and over is $15 per month. No contract between local boards of education and the area vocational school is made for adults.

The financial support for vocational education for the year ending June 30, 1961, was as follows:

| | |
|---|---|
| Federal funds - all programs | $1,227.254 |
| Foundation funds (state and local) | 3,904,146 |
| State funds - vocational appropriation | 1,203,071 |
| fees and incidental receipts | 299,867 |
| | $6,634,338 |

* The secondary phase of vocational education is financed through the state foundation program for education. Under this program, each district is required to make a minimum effort; and after this effort has been met, the state finances the additional cost of the program up to a certain limit.

Enrollment Data. Approximately 42,000 high school students and 18,000 adults received some type of vocational training in Kentucky in 1961. The Area Vocational-Technical Schools of Kentucky offer programs for high school youths, high school graduates not wishing to attend college, out-of-school youths between 16 and 21 years of age who have completed or have dropped out of regular school

programs, veterans, physically handicapped students (admitted under auspices of the Bureau of Vocational Rehabilitation), and any adult desiring such instruction so long as he can meet the standards established by the schools for enrollment.

Training Programs Offered. Each area vocational school offers a variety of courses of less than college grade, the choice of which are influenced by the major occupational fields in which the residents of the area are engaged. Training is provided for industrial and electronic technicians, licensed practical nurses, beauty culture, food trades, and office practice, as well as for most other trades found in the immediate area.

Courses are organized to meet the training needs of the occupation. They may range from one to two weeks up to two years in length. Most basic courses for skilled trades are organized for 2,640 hours of instruction. These courses may be completed in 22 months of full-time instruction of six hours per day on the post high school level.

The courses offered by the area vocational schools are developed by the instructional staff in the school in consultation with labor and industry.

## LOUISIANA

Extent of Program. Louisiana had 27 State-operated Trade and vocational-technical schools in operation in 1962. Three new schools have recently been added to Louisiana's vocational-technical school operation, and an additional school is under construction as of this writing. The completion of these four schools will increase the total to 31 in Louisiana. The stated objectives of the vocational-technical school program in Louisiana are as follows:

> (1) To provide pre-employment training in the basic manipulative skills and technical knowledge, fitting persons for useful employment in trade and industrial pursuits.

(2) To provide instruction of an extension of supplementary type to employed persons. Instruction that will further develop performance, skills, technical knowledge, and industrial information relative to specific daily employed groups.

An important part in Louisiana's vocational education program is the Curriculum Laboratory for the State-operated Area Trade and Vocational-Technical schools located in Natchitoches. In this laboratory is developed most of the instructional material used by the various schools. All of the instructional material prepared by the laboratory is handled on a contract basis under the supervision of a State Craft Committee and an over-all Curriculum Advisory Committee. The contract writers are closely supervised during the time they are developing instructional material for the area vocational schools.

Costs of Program.The land, buildings and equipment of the state-operated area vocational schools in fiscal year 1961-1962 were evaluated at over $9.6 million. From June 1, 1961 through June 30, 1962, $4.7 million were expended in the operation of the schools. Of this amount, $3.9 million came from State appropriations, $652,000 came from federal funds and $84,500 from other sources.

Enrollment Data. In fiscal year 1961-1962 a total of 29,745 persons received training from the area vocational-technical schools. Of this amount, 13,680 were classed as pre-employment and received day instruction, and 16,065 were enrolled in the evening programs geared toward the upgrading of employed persons.

Training Programs Offered. The programs offered by the Louisiana vocational-technical schools are divided into the two categories mentioned above of (1) pre-employment, and (2) extension programs for upgrading employed persons. In the pre-employment class the schools offer programs in such fields as air conditioning and refrigeration, auto mechanics and body work, electronic communications, farm mechanics, carpentry, barbering, business training, cosmetology, practical

nursing, drafting, navigation and seamanship, watchmaking, commercial cooking, etc.

Many of these same programs are offered to the evening students, but also included in their curricula are such courses as fireman training, supervisory training, pipefitting, measuring and diagraming, and training for licensed electronic technicians.

A new entry into the curriculum is the training program in electronic digital computers. Several of the Louisiana schools have undertaken to provide training in this and other technical fields. Louisiana, like most states surveyed, depends largely upon the industrial demands of the surrounding area for a training course subject.

## MARYLAND

Extent of Program. Maryland has neither State-operated and supported vocational-technical schools, nor State-operated or supported area or community vocational schools. Vocational and technical programs in Maryland are operated by the County Boards of Education as a part of the operation of comprehensive high schools, except in Baltimore City, where two separate vocational-technical high schools are operated.

In addition, at least five community colleges are currently offering terminal programs in technical education.

Costs of Program. No State funds are appropriated and designated for vocational education per se. The State funds used for vocational education are distributed according to a formula providing funds for the over-all foundation school program and are not designated for specific purposes. Funds for the college programs of vocational education are handled in the same manner as for any other program and neither local nor State funds are earmarked for technical

education. Due to this method of financing, the Maryland Department of Education was unable to supply any indication of the amount used exclusively for vocational education, however, reports received from the local school districts indicate the following amounts were expended during fiscal 1963 for vocational purposes:

| | |
|---|---|
| State funds | $1,671,115 |
| Local funds | 637,362 |
| Federal funds | 702,937 |
| Total | $3,011,414 |

Enrollment Data. Information not available.

Training Program Offered. Information not available.

## MISSISSIPPI

Extent of Program. Mississippi does not have vocational-technical schools as such supported with State funds. There is, however, a system of 17 junior colleges offering vocational and technical education.

Costs of Program. The junior colleges receive a State appropriation of approximately $750,000 for vocational and technical education. In addition to their State appropriation, some federal funds are made available for course reimbursement.

Enrollment Data. Enrollments for October 1963 totaled 2,772 in the junior college vocational-technical courses.

Training Programs Offered. These junior colleges offer a total of 42 study programs including electronics, building construction, practical nursing, data processing procedures, salesmanship, barbering, secretarial,etc.

## MISSOURI

Extent of Program. Missouri has no State-supported and operated vocational-technical schools, nor does it have any area vocational-technical schools which are supported jointly by the locality and the State. Missouri does have, however, three vocational-technical schools which have been formed by the combined efforts of several adjoining school districts and are generally called "area" vocational schools. The laws of Missouri specifically allow one school district to send pupils to another school district for vocational classes and to pay the required tuition.

Most of the larger high school districts operate vocational-technical programs as a part of the total school program.

Costs of Program. The annual appropriation of State funds for the support of all vocational education in Missouri is slightly less than $1,000,000 per year. Local school districts provide better than 80% of the total costs of vocational education in Missouri. There are no special funds provided on the State level for any type of vocational school or vocational program. Under a general law which provides $50,000 in State funds for the building of new buildings in a reorganized or enlarged school district, the school board might choose to use all of such funds for vocational-technical education facilities. This option is left to the local school officials.

Training Programs Offered. Under the public school system vocational program as well as the area school programs Missouri students have access to courses such as agriculture, home economics, the trades, distributive education, technical education, and practical nursing.

## NORTH CAROLINA

Extent of Program. North Carolina has recently embarked upon an extensive vocational school program. Since 1958 the State has established a number of public two-year educational institutions beyond the high school. The 1963 General Assembly made provisions for a State-wide system of comprehensive community colleges, technical institutes and industrial education centers. The system was established after a thorough study was made by the Governor's Commission on Education Beyond the High School.

In this system of institutions, North Carolina has two community colleges, eleven technical institutes and eight industrial education centers. Plans are being made for one industrial education center and one technical institute to expand to community colleges. Five additional community colleges and two technical institutes will be established by 1965 or 1966. In addition to these institutions, a number of extension units have been established in outlying areas where the population density does not justify an independent institution.

The title of "industrial education center" is used for institutions which offer trade level vocational courses and general adult courses. The "technical institute" offers both of these types of programs and, in addition, technical and semi-professional curriculums. The "community college" offers all of these programs as well as the first two years of regular college work. The institutions are similarly organized, similarly financed and differ from one another only in the breadth of the curriculum offerings. Eventually, North Carolina expects to have one of these institutions located within commuting distance of almost all of the citizens of the state.

Costs of Program. Present practice provides that land and buildings for the industrial education centers and technical institutes, and certain operating

costs be financed by the county in which the center is located. Most of the funds for the operation of the centers and institutes, however, come from the state. Operational expenditures paid for by the state include equipment, salaries of administrative and instructional staffs, and other costs. All students to any of the vocational-technical schools, including the community colleges, are required to pay a tuition fee of $30.00 per quarter if enrolled full-time. Additional expenses include the cost of purchasing textbooks and a limited number of supplies in some instances.

The budget for 1963-64 for the operation of all industrial education centers, technical institutes and community colleges approximated $6 million. For the year 1965-66, it will be $10 million. It is estimated that the investment in plants, equipment, etc., exceeds $16 million.

Enrollment Data. During the 1963-64 school year 50,000 students were enrolled in some type of trade and industrial education program in North Carolina. This is the equivalent of 6,000 full-time students. It is estimated that the enrollment by 1966 in the various types of programs offered in industrial education centers and other similar institutions will be 100,000, or 50,000 full-time equivalent students.

Training Programs Offered. Each of the three types of institutions offer a vocational and technical specialty program. This program is consisted of one-year trade level curriculums for full-time and part-time students. Examples of these curriculums are automotive mechanics, engineering and technical secretary, machinist, practical nurse education, and mechanical drafting.

Short-term intense courses are also a part of the vocational and technical specialty program. One type is machine operator training which is usually short and intensive and is directed toward developing skilled machine operators such as loopers, drill press operators and power sewing operators. A second type is supervisory training, aimed at upgrading supervisors in industry. Typical

courses in this type of training are job relations, job instruction, time study, cost control, work methods improvement, and labor legislation. A third type is "updating" courses for employed adults. A wide variety of courses are offered such as electrical code, heat treating, precision measurement, and color television servicing.

The other type occupational program offered is the technician program. This is a two-year program and is offered in technical institutes and community colleges. Technology curriculums are offered in fields such as data processing, civil engineering, agriculture, mechanical, dental and business.

## TENNESSEE

Extent of Program. Tennessee is in the process of planning and developing a state-wide system of Area Vocational-Technical Schools. Initial plans call for the construction and operation of ten new state-operated Area Vocational-Technical schools and one Technical Institute. Presently there are four Area Vocational-Technical Schools in operation. These schools are being operated by local school systems under contract with the State Board for Vocational Education.

Cost of Program. Approximately $100,000 each are expended in operating Tennessee's four vocational-technical schools. At the present time this money is supplied solely by the state. The 1963 General Assembly of Tennessee enacted legislation for the purpose of increasing the Area School program and appropriated $5,000,000 for capital outlay purposes. In addition, an appropriation was made for operation in the amount of $750,000 for fiscal 1963-64 and $1,000,000 for fiscal 1964-65.

Enrollment Data. Instruction is presently limited to pre-employment training and students are given an aptitude test prior to enrollment. In addition,

each student is given an interview and counseled with respect to enrolling in the course most appropriate to his or her interest, aptitude, educational attainment, and ability. No tuition is charged; however, students are required to provide their own textbooks and workbooks.

Training Programs Offered. The Area Schools offer courses for the purposes of training engineering technicians for industry, and preparing the student to earn a living as a technician, technical worker, or skilled workman in the field of production, distribution, or service. Each school contains adequate facilities for a minimum of five occupational classes. If funds are not otherwise available through other vocational education services, extension classes for employed workers designed to up-grade their skills and knowledge may be included.

## TEXAS

Extent of Program. Texas does not have a system of State-supported and operated vocational-technical schools, nor does it have area vocational-technical schools supported jointly by the locality and the State. The vocational-technical education programs are operated by public school systems, public junior colleges and public senior colleges.

Costs of Program. State funds appropriated by the 1963 Legislature for these programs were $1,575,718 for each year of the 1963-1965 biennium. Additionally, for operation of high school programs in 1964, approximately $20,000,000 of State moneys are available from the Minimum Foundation School Program Fund. In addition to these State funds, the Federal government provides approximately $4,000,000 for programs administered by public high schools, public junior colleges and public senior colleges.

Enrollment Data. Information not available.

Programs Offered. Information not available.

## VIRGINIA

Extent of Program. Virginia has 9 schools classed as area vocational-technical schools. These schools are locally operated but receive State reimbursement for part of the salary and equipment. Some of these schools began in the early 1940's and some are housed in new structures while others are housed in temporary facilities or old school buildings. There are no State-owned and State-operated vocational-technical schools for which the State has total responsibility.

Virginia does have an extensive vocational program in the high schools and at the adult level separately from the area vocational-technical school program.

Costs of Program. The total proposed expenditure for vocational education in Virginia during the 1963-1964 school year is $7,002,658. State funds will account for $5,601,173 of this and Federal funds will supply the remaining $1,401,485. This includes the State reimbursement for teachers salaries in the 9 area vocational-technical schools, but does not include the local funds expended for area schools. The reimbursement for instructors is on the basis of 2/3 State funds and 1/3 local funds through local school divisions. The State reimburses 1/2 of the cost of equipment as far as funds permit. The buildings, land, etc. are all furnished by the locality.

Enrollment Data. During the 1961-1962 school year vocational education had an enrollment of approximately 160,000 students. High school programs accounted for the majority of this number with 108,302 students enrolled in some course of vocational training. The adult vocational programs, which are mostly given as evening instruction, had 49,002 enrollees. The Area vocational-technical schools enrolled 1,879 students in their various programs. In addition to the regular vocational programs, 292 schools offered industrial arts courses with a total enrollment of 47,624. Although, industrial arts does not have vocational

preparation as its major objective, many students who enroll in industrial arts for their third or fourth years, develop skills leading to preparation for industrial employment.

Training Programs Offered. Programs of study available to the high school students include agriculture, business, distributive education, home economics, and industrial trade courses. The adult programs are essentially the same with the addition of technical training in different fields. The area schools offer approximately the same type of program of study but greater emphasis is placed on the trades.

## WEST VIRGINIA

Extent of Program. West Virginia does not have a state-supported and operated vocational-technical school. The state does, however, work with county boards of education in providing vocational instruction. At the present time four counties operate vocational-technical centers that serve two or more high schools within their county boundaries.

Costs of Program. The counties operating vocational-technical centers receive aid in support of the vocational courses provided. The state vocational aid amounts to $1,200 per instructor for the Trade and Industrial Education categories, twenty-five per cent of instructional salary for Vocational Agriculture, and fifty per cent of instructional salary for Technical Education categories. The annual appropriation of state funds for the support of vocational and technical education amounted to $451,354 for the fiscal year 1962-63. The expenditures made by county boards of education in support of vocational and technical education amounted to $1,575,405.

Enrollment Data. Information not available.

Training Programs Offered. Information not available.